

09/17/03

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Jürgen WAFZIG and Gerhard GUMPOLTSBERGER  
Serial no. :  
For : POWER BRANCHED TRANSMISSION  
Docket : ZAHFRI P548US

MAIL STOP PATENT APPLICATION  
The Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

**PRELIMINARY AMENDMENT**

Dear Sir:

By way of preliminary amendment, please amend the above identified application as set forth below.

**In the Drawing:**

Please cancel original Fig. 1 with new formal Fig. 1 per the attached Submission.

**In the Specification:**

Please amend paragraphs 2, 3, 4, 11, 12, and 17-20 of the specification as follows in which the specification additions are shown by underlining and the specification deletions are shown by strikeout. Please enter the replacement specification paragraphs into the record of this case.

**In the Claims:**

Please cancel claims 1-6, without prejudice or disclaimer of the subject matter therein, in favor of new claims 7-15 as follows.

[002] **FIELD OF THE INVENTION** ◆◆

[003] This invention is based on a power branched transmission that includes a frictional wheel variator according to the main concept of patent Claim 1. ◆◆

[004] **BACKGROUND OF THE INVENTION** ◆◆

[011] The goal is achieved by means of the characteristics of patent claim 1. ◆◆  
Other execution models and advantages can be seen in the sub-claims. ◆◆

[012] **SUMMARY OF THE INVENTION** ◆◆

[017] **BRIEF DESCRIPTION OF THE DRAWING** ◆◆

[018] In the following section the invention will be explained in more detail based on now be described, by way of example, with reference to the accompanying drawings in which: ◆◆

[019] Fig. 1 is a drawing that depicts a preferred execution model. ◆◆

[020] **DETAILED DESCRIPTION OF THE INVENTION** ◆◆

1-6. (CANCELED)

7. (NEW) A power branched transmission having a frictional wheel variator and first and second planetary gears;

wherein the frictional wheel variator (1), the first planetary gear (2) and the second planetary gear (3) are all coaxially positioned behind one another along a power flow direction of the transmission.

8. (NEW) The power branched transmission according to claim 7, wherein power conveyed by the frictional wheel variator (1) is sent coaxially across the first planetary gear (2) to the second planetary gear (3) which is connected with the driven shaft (5).

9. (NEW) The power branched transmission according to claim 7, wherein the first planetary gear (2) is located between a disc pair of the frictional wheel variator (1).

10. (NEW) The power branched transmission according to claim 7, wherein first and second outer torus discs (6,7) of the frictional wheel variator (1) are supplied with rotational drive from a motor shaft (4), whereby the first outer torus disc (6) is directly connected with the motor shaft (4) and the second outer torus disc (7) is connected with the motor shaft (4) via a flange (8) of the first planetary gear (2), and the motor shaft (4) is connected with a flange (8') of the second planetary gear (3) across the flange (8) of the first planetary gear (2).

11. (NEW) The power branched transmission according to claim 7, wherein the output power of the frictional wheel variator (1) is conveyed to the sun wheel (9) of the first planetary gear (2), output power from the first planetary gear (2) is sent across a ring gear (10) of the first planetary gear (2), viewed in the power flow direction of the transmission, to the sun wheel (9') of the second planetary gear (3) and, in the second planetary gear (3), the output power from the frictional wheel variator (1) and the output power from the motor shaft (4) are added with one another and sent across a ring gear (10') of the second planetary gear (3) to the driven shaft (5).

12. (NEW) The power branched transmission according to claim 7, wherein the power branched transmission has a geared-neutral characteristic so that the power branched transmission no shifting elements are envisioned.

13. (NEW) The power branched transmission according to claim 7, wherein first and second outer torus discs (6,7) of the frictional wheel variator (1) are supplied with rotational drive from a motor shaft (4), whereby the first outer torus disc (6) is directly

connected with the motor shaft (4) and the second outer torus disc (7) is connected with the motor shaft (4) via a flange (8) of the first planetary gear (2), and the motor shaft (4) is connected with a flange (8') of the second planetary gear (3) across the flange (8) of the first planetary gear (2); and

the output power of the frictional wheel variator (1) is conveyed to the sun wheel (9) of the first planetary gear (2), output power from the first planetary gear (2) is sent across a ring gear (10) of the first planetary gear (2), viewed in the power flow direction of the transmission, to the sun wheel (9') of the second planetary gear (3) and, in the second planetary gear (3), the output power from the frictional wheel variator (1) and the output power from the motor shaft (4) are added with one another and sent across a ring gear (10') of the second planetary gear (3) to the driven shaft (5).

14. (NEW) The power branched transmission according to claim 7, wherein two outer torus discs (6,7) of the frictional wheel variator (1) are supplied with motor revolutions, whereby one outer torus disc (6) is connected directly with a motor shaft (4) and the second torus disc (7) is connected by means of a flange (8) of the first planetary gear (2) with the motor shaft (4), and whereby the motor shaft (4) is connected across the flange (8) of the first planetary gear (2) with the flange (8') of the second planetary gear (3).

15. (NEW) The power branched transmission according to claim 7, wherein the output power of the frictional wheel variator (1) is conveyed to the sun wheel (9) of the first planetary gear (2), where the output power is sent across the ring gear (10) of the first planetary gear (2) by means of the second disc pair of the frictional wheel variator (1), as viewed in the direction of power flow, to the sun wheel (9') of the second planetary gear (3) and by components of the frictional wheel variator (1) in the second planetary gear (3) and a direct portion of the motor revolutions are added and sent across a ring gear (10') to the driven shaft (5).